CLAIMS

1. (Amended) An information processing apparatus, having a first physical processor and a plurality of second physical processors, for processing data by allocating a plurality of logical processors to the plurality of second physical processors in a time sharing manner, the information processing apparatus comprising a context management unit, the context management unit mapping a context for a logical processor having no physical processor allocated thereto, to a logical partition address space of a logical partition to which the logical processor is applied, storing the mapped context, and notifying the logical processor of an access address of the context, and

the logical processor accessing the context using the access address.

2. (Amended) The information processing apparatus according to claim 1, comprising:

a control operating system allocating the plurality of logical processors to the second physical processor in a time sharing manner, and

a guest operating system associated with the logical partition to which the logical processor is applied,

wherein based on a system call from the guest operating

system to the control operating system, the control operating system maps the context for the logical processor of the guest operating system associated logical partition to the logical partition address space of the guest operating system associated logical partition and stores the mapped context.

3. (Amended) The information processing apparatus according to claim 2, wherein based on the system call from the guest operating system to the control operating system, the control operating system excludes the logical processor to which the guest operating system associated logical partition is applied, from the time sharing process as an allocation target to be allocated the second physical processor, maps the context for the logical processor to the logical partition address space, and stores the mapped context.

4. The information processing apparatus according to claim 2, wherein the control operating system switches between an active state for allocating the logical processor to the physical processor and an inactive state for not allocating the logical processor to the physical processor, and wherein the control operating system sets the guest operating system applied logical processor to be in inactive

state, maps the context of the logical processor to the logical partition address space, and stores the context, based on the system call from the guest operating system to the control operating system.

5. The information processing apparatus according to claim 4, wherein the control operating system restores the logical processor back to an allocation candidate to be allocated to the physical processor with the guest operating system applied logical processor reset to the active state from the inactive state based on the system call from the guest operating system to the control operating system.

6. The information processing apparatus according to claim 1, wherein the context management unit stores the context of the logical processor in at least one of a register of the logical processor, an input-output port, and a local storage.

7. (Amended) A process control method of an information processing apparatus, having a first physical processor and a plurality of second physical processors, for processing data by allocating a plurality of logical processors to the plurality of second physical processors in a time sharing manner, comprising:

a logical processor scheduling step of scheduling the logical processor to exclude the logical processor from an allocation candidate to be allocated to the second physical processor;

a context storage step of mapping a context for the logical processor excluded as an allocation candidate to be allocated to the second physical processor to a logical partition address space of a logical partition to which the logical processor is applied, storing the mapped context, and notifying the logical processor of an access address of the context; and

a step of accessing the context with the access address in the logical processor.

8. (Amended) The process control method according to claim 7, further comprising a system call output step of outputting a system call from the guest operating system to the control operating system,

wherein the logical processor scheduling step includes excluding the logical processor as an allocation candidate to be allocated to the second physical processor based on the system call; and

wherein the context storage step includes mapping the context for the logical processor to which the logical partition with the guest operating system associated

therewith is applied, to the logical partition address space with the guest operating system associated therewith, based on the system call, and storing the mapped context.

9. (Amended) The process control method according to claim 8, wherein the control operating system switches between an active state for allocating the logical processor to the second physical processor and an inactive state for not allocating the logical processor to the second physical processor, and

wherein based on the system call from the guest operating system to the control operating system, the control operating system sets the guest operating system applied logical processor to be in inactive state, maps the context for the logical processor to the logical partition address space, and stores the mapped context.

10. (Amended) The process control method according to claim 9, wherein the control operating system restores the logical processor back to an allocation candidate to be allocated to the second physical processor with the guest operating system applied logical processor reset to the active state from the inactive state based on the system call from the guest operating system to the control operating system.

11. (Amended) A computer program for causing a computer to perform a process control method in an apparatus, having a first physical processor and a plurality of second physical processors, for processing data by allocating a plurality of logical processors to the plurality of second physical processors in a time sharing manner, comprising:

a logical processor scheduling step of scheduling the logical processor to exclude the logical processor from an allocation candidate to be allocated to the second physical processor;

a context storage step of mapping a context for the logical processor excluded as an allocation candidate to be allocated to the second physical processor to a logical partition address space of a logical partition to which the logical processor is applied, storing the mapped context, and notifying the logical processor of an access address of the context; and

a step of accessing the context with the access address in the logical processor.